

6181Y / BS 6004 Hook Up Wire **pro-POWER**



**RoHS
Compliant**

Application

Fixed installation in dry or damp areas for domestic and light industrial wiring. Also used in connection to (smart) meters.

Characteristics

Voltage Rating (Uo/U) : 300/500V
 Temperature Rating : Fixed: -15°C to +70°C
 Minimum Bending Radius : Fixed: 4 × overall diameter
 Insulation Colour : Blue, Brown
 Sheath Colour : Grey

This product range is available on reels of 50m or per metre.

Cable Standards

BS 6004, BS EN/IEC 60332-1-2

Construction

Conductor

Class 2 stranded copper conductor according to BS EN 60228 (previously BS 6360)

Insulation

PVC (Polyvinyl Chloride) Type T11 according to BS EN 50363

Sheath

PVC (Polyvinyl Chloride) Type 6 according to BS EN 50363

Dimensions

Nominal Cross Sectional Area mm ²	Nominal Diameter of Conductor mm	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm
25	5.9	1.2	11.1

Class 2 Stranded Conductor for Single Core and Multi-Core Cables

Nominal Cross Sectional Area mm ²	Minimum No. of Wires in Conductor						Maximum Resistance of Conductor @ 20°C	
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor	
	Cu	Al	Cu	Al	Cu	Al	Plain Wires Ω/km	Metal Coated Wires Ω/km
25	7	7	6	6	6	6	0.727	0.734

Electrical Characteristics

Current Carrying Capacity

Nominal Cross Sectional Area mm ²	Reference Method A (Enclosed in Conduit in Thermally Insulating Wall ETC) Amps		Reference Method B (Enclosed in Conduit on a Wall or in a Trunking ETC) Amps		Reference Method C (Clipped Direct) Amps	
	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC	3 or 4 Cables Three-Phase AC	2 Cables Single-Phase AC or DC Flat or Touching	3 or 4 Cables Three-Phase AC Flat, Touching or trefoil
25	80	73	101	89	114	104

Nominal Cross Sectional Area mm ²	Reference Method F (In free Air on a Perforated Cable Tray Horizontal & Vertical) Amps				
	Touching			Spaced by one diameter	
	2 Cables Single-Phase AC or DC Flat	3 Cables Three-Phase AC Flat	3 Cables Three-Phase AC trefoil	2 Cables Single-Phase AC or DC or 3 Cables Three-Phase AC flat	
				Horizontal	Vertical
25	131	114	110	146	130

Ambient Temperature: 30°C

Conductor Operating Temperature: 70°C

The above table is in accordance with Table 4D1A of the 17th Edition of IEE Wiring Regulations.

Voltage Drop

Nominal Cross Sectional Area mm ²	2 Cables DC mV/A/m	2 Cables Single-Phase AC mV/A/m								
		Reference Methods A and B (enclosed in conduit or trunking)			Reference Methods C and F (clipped direct, on tray or in free air)					
					Cables Touching			Cables Spaced*		
		r	x	z	r	x	z	r	x	z
25	1.75	1.8	0.33	1.8	1.75	0.2	1.75	1.75	0.29	1.8

Nominal Cross Sectional Area mm ²	3 or 4 Cables Three-Phase AC mV/A/m											
	Reference Methods A and B (enclosed in conduit or trunking)			Reference Methods C and F (clipped direct, on tray or in free air)								
				Cables Touching, Trefoil			Cables Touching, Flat			Cables Spaced*, Flat		
	r	x	z	r	x	z	r	x	z	r	x	z
25	1.5	0.29	1.55	1.5	0.175	1.5	1.5	0.25	1.55	1.5	0.32	1.55

Conductor Operating Temperature: 70°C

r = Resistive Component; x = Reactive Component; z = Impedance Value

* Spacing larger than one cable diameter will result in larger volt drop.

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De-Rating Factors

For Ambient Air Temperatures other than 30°C

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-Rating Factor	1.03	1	0.94	0.87	0.79	0.71	0.61	0.5

Part Number Table

Description	Part Number
6181Y / BS 6004 Hook Up Wire, Grey/Blue	PP002118
6181Y / BS 6004 Hook Up Wire, Grey/Brown	PP002119

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